

Title (en)

METHOD AND DEVICE FOR MEASURING THE CONCENTRATION OF SUBSTANCES IN GASEOUS OR FLUID MEDIA THROUGH OPTICAL SPECTROSCOPY USING BROADBAND LIGHT SOURCES

Title (de)

VERFAHREN UND VORRICHTUNG ZUM MESSEN DER STOFFKONZENTRATION IN GASFÖRMIGEN ODER FLUIDEN MEDIEN ÜBER OPTISCHE SPEKTROSKOPIE MITTELS BREITBANDIGER LICHTQUELLEN

Title (fr)

PROCÉDÉ ET DISPOSITIF DE MESURE DE LA CONCENTRATION D'UNE SUBSTANCE DANS DES MILIEUX GAZEUX OU FLUIDES PAR SPECTROSCOPIE OPTIQUE À L'AIDE DE SOURCES LUMINEUSES À LARGE BANDE

Publication

EP 2380005 A1 20111026 (DE)

Application

EP 09796360 A 20091210

Priority

- EP 2009066840 W 20091210
- DE 102008064173 A 20081222

Abstract (en)

[origin: WO2010072578A1] The invention relates to a method and to a device for using partially non-stabilized broadband light sources to accurately measure partially broadband-absorbing substances using referencing measuring cells. In order to create a low-cost, high-resolution, and at the same time fast spectrographic device for measuring concentrations of substances in fluid or gaseous media that is also suitable for harsh environments, the light radiated by the broadband light sources (1) through light guiding optical systems is fed through the measuring section of the self-referencing measuring cell (20, 30, 40) or only partially through a measuring cell (10) to a measurement detector (photoreceptor 11) and partially through a reference path (optical waveguide 8) to a reference detector (photoreceptor 15), and a mode coupler (5, 9, 14) is associated with each optical waveguide (2, 4, 7, 8) in order to homogenize the radiation characteristic of the broadband light sources (1), which varies over time and space.

IPC 8 full level

G01N 21/3504 (2014.01); **G01J 3/02** (2006.01); **G01J 3/42** (2006.01); **G01N 21/27** (2006.01)

CPC (source: EP GB US)

G01J 3/02 (2013.01 - EP GB US); **G01J 3/0297** (2013.01 - EP US); **G01J 3/42** (2013.01 - EP GB US); **G01N 21/0303** (2013.01 - US); **G01N 21/274** (2013.01 - EP GB US); **G01N 21/31** (2013.01 - US); **G01N 21/33** (2013.01 - US); **G01N 21/3504** (2013.01 - EP GB US); **G01N 2021/0307** (2013.01 - EP GB US); **G01N 2201/062** (2013.01 - US); **G01N 2201/0631** (2013.01 - US); **G01N 2201/0668** (2013.01 - US); **G01N 2201/08** (2013.01 - US)

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

DOCDB simple family (publication)

DE 102008064173 A1 20100701; **DE 102008064173 B4 20110601**; EP 2380005 A1 20111026; EP 2380005 B1 20160127; EP 3009829 A1 20160420; EP 3009829 B1 20170308; ES 2565413 T3 20160404; ES 2626574 T3 20170725; GB 201111225 D0 20110817; GB 2478254 A 20110831; US 10408745 B2 20190910; US 2012006098 A1 20120112; US 2016341660 A1 20161124; WO 2010072578 A1 20100701

DOCDB simple family (application)

DE 102008064173 A 20081222; EP 09796360 A 20091210; EP 15192390 A 20091210; EP 2009066840 W 20091210; ES 09796360 T 20091210; ES 15192390 T 20091210; GB 201111225 A 20091210; US 200913141380 A 20091210; US 201615226614 A 20160802